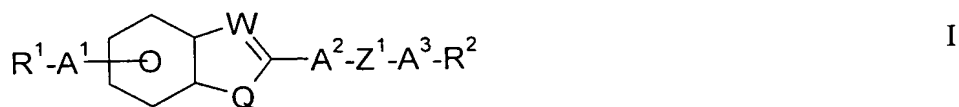


This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Original) Polymerizable, luminescent compounds of formula I



wherein

$R^1, R^2$  are independently of each other H, halogen,  $NO_2$ , CN, NCS, straight chain, branched or cyclic alkyl with 1 to 25 C-atoms wherein one or more  $CH_2$  groups may also be replaced by  $-CO-$ ,  $-O-$ ,  $-S-$ ,  $-NR^0-$ ,  $-CH=CH-$ ,  $-C\equiv C-$  in such a manner that O- and/or S-atoms are not linked directly to one another, and wherein one or more H-atoms may also be replaced by F or Cl, or denotes  $P-(Sp-X)_n-$ ,

$Sp$  is a spacer group with 1 to 20 C-atoms,

$P$  is a polymerizable group,

$X$  is  $-O-$ ,  $-S-$ ,  $-CO-$ ,  $-COO-$ ,  $-OCO-$ ,  $-CO-NR^0-$ ,  $-NR^0-CO-$ ,  $-NR^0-$  or a single bond,

$n$  is 0 or 1,

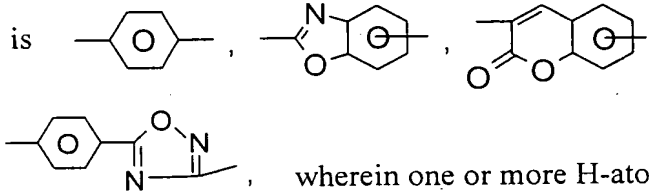
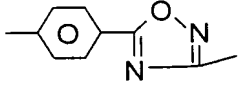
$R^0$  is H or alkyl with 1 to 5 C-atoms,

$A^1$  is 1,4-phenylene, wherein 1, 2, 3 or 4 H-atoms may be replaced by F or Cl, or a single bond,

$Q$  is  $-O-$ ,  $-S-$ ,  $-NR^0-$  or  $-N\begin{matrix} \diagup \\ \diagdown \end{matrix} (X-Sp)_n-P$ ,

W is  $-\text{CH}=\text{}$ ,  $-\text{N}=\text{}$  or  $-\text{CO}-\text{CH}=\text{}$ ,

$\text{A}^2$  is 1,4-phenylene or 2,5-thiophene, wherein in each case one or more H-atoms may be replaced by F or Cl, or denotes a single bond,

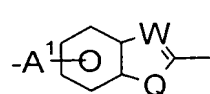
$\text{A}^3$  is  or  
 wherein one or more H-atoms can be replaced by F or Cl,

$\text{Z}^1$  is  $-\text{CH}=\text{CH}-$ ,  $-\text{CF}=\text{CH}-$ ,  $-\text{CH}=\text{CF}-$ ,  $-\text{CF}=\text{CF}-$  or a single bond

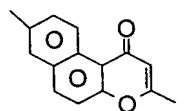
with the proviso that

a) the compounds of formula I contain one, two or more groups  $-(\text{X}-\text{Sp})_n-\text{P}$ ,

b) if W denotes  $-\text{CO}-\text{CH}=\text{}$ , then



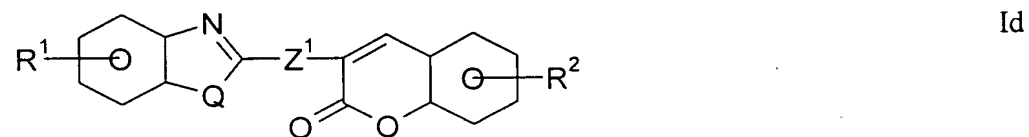
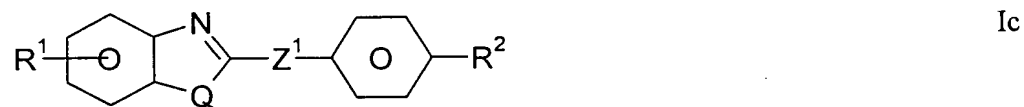
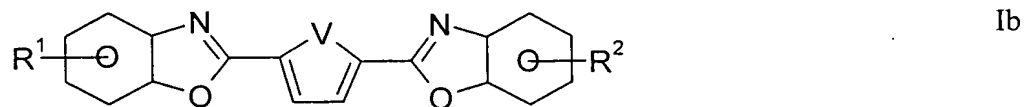
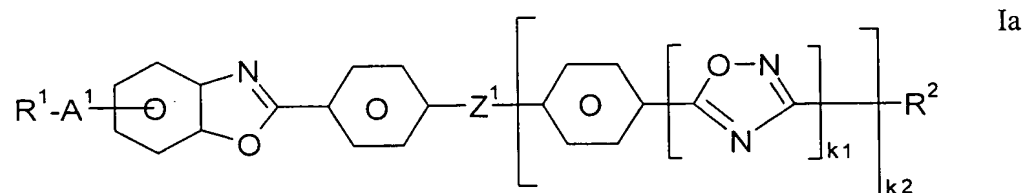
denotes



c) if W is  $-\text{N}=\text{}$ , Q is  $-\text{O}-$ ,  $\text{A}^2$  and  $\text{Z}^1$  are a single bond,  $\text{A}^3$  is 1,4-phenylene and  $\text{R}^2$  is  $\text{P}-(\text{Sp}-\text{X})_n-$  then  $\text{R}^1$  is an achiral group,

d) if W is  $-\text{N}=\text{}$ , Q is  $-\text{O}-$ ,  $\text{A}^2$  and  $\text{A}^3$  denote 1,4-phenylene and  $\text{Z}^1$  is a single bond then  $\text{A}^1$  is a single bond.

2. (Original) Compounds according to claim 1 wherein W denotes -N=.
3. (Original) Compounds according to claim 1 wherein W denotes -CH= and Q is -O-.
4. (Original) Compounds according to claim 2 selected of the following subformulae



wherein

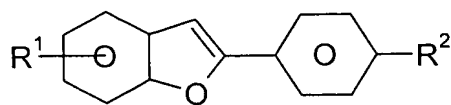
k<sub>1</sub>, k<sub>2</sub> are independently of each other 0 or 1,

V is -S- or -CH=CH- and

R<sup>1</sup>, R<sup>2</sup>, Q,  
Z<sup>1</sup> and A<sup>1</sup> are defined as in claim 1,

with the proviso that if Z<sup>1</sup> denotes a single bond, k<sub>1</sub> = 0 and k<sub>2</sub> = 1, then A<sup>1</sup> is a single bond.

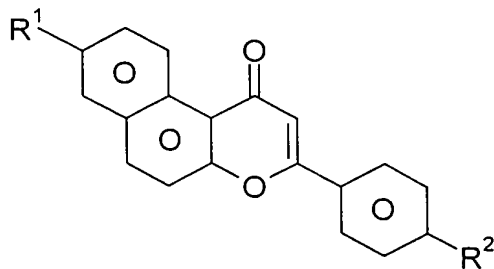
5. (Original) Compounds according to claim 3 of the subformula Ie



Ie

wherein R<sup>1</sup> and R<sup>2</sup> are defined as in claim 1.

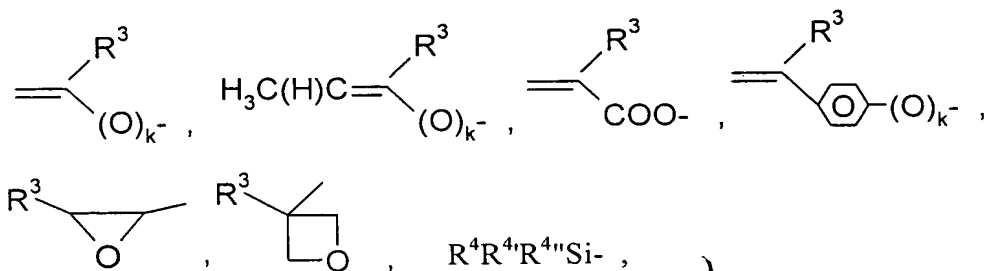
6. (Original) Compounds according to claim 1 of the subformula If



If

wherein R<sup>1</sup> and R<sup>2</sup> are defined as in claim 1.

7. (Currently Amended) Compounds according to ~~one of the preceding claims 1 to 6~~ claim 1 wherein P is selected from



wherein

R<sup>3</sup> is H, Cl or alkyl with 1 to 5 C-atoms,

R<sup>4</sup>, R<sup>4'</sup>, R<sup>4''</sup> are independently of each other -Cl, -O-alkyl and/or -O-CO-alkyl with alkyl having 1 to 5 C-atoms and

k is 0 or 1.

8. (Currently Amended) Polymerizable mixture comprising at least one compound according to ~~one of the claims 1 to 7~~ claim 1.
9. (Original) Polymerizable mixture according to claim 8 further comprising at least one polymerizable mesogenic compound of formula II



wherein

P is a polymerizable group,

Sp is a spacer group having 1 to 20 C-atoms,

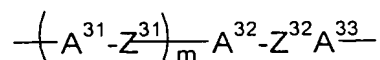
X is a group selected from -O-, -S-, -CO-, -COO-, -OCO-, -O-COO-, -SO<sub>2</sub>-O-, -O-SO<sub>2</sub>- or a single bond,

n is 0 or 1,

R<sup>21</sup> is H or an alkyl radical with up to 25 C atoms which may be unsubstituted, mono- or polysubstituted by halogen or CN, it being also possible for one or more non-adjacent CH<sub>2</sub> groups to be replaced, in each case independently from one another, by -O-, -S-, -NH-, -N(CH<sub>3</sub>)-, -CO-, -COO-, -OCO-, -OCO-O-, -S-CO-, -CO-S- or -C≡C- in such a manner that oxygen atoms are not linked directly to one another, or alternatively R<sup>21</sup> is halogen, cyano or has independently one of the meanings given for P-(Sp-X)<sub>n</sub>,

MG is a mesogenic or mesogeneity supporting group.

10. (Original) Polymerizable mixture according to claim 9 wherein MG is a mesogenic or mesogeneity supporting group of formula III



III

wherein

$A^{31}$ ,  $A^{32}$ ,  $A^{33}$  being independently from one another 1,4-phenylene in which, in addition, one or more CH groups may be replaced by N, 1,4-cyclohexylene in which, in addition, one or two non-adjacent  $CH_2$  groups may be replaced by O and/or S, 1,4-cyclohexenylene or naphthalene-2,6-diyl, it being possible for all these groups to be unsubstituted, mono- or polysubstituted with halogen, cyano or nitro groups or alkyl, alkoxy or alkanoyl groups having 1 to 7 C atoms wherein one or more H atoms may be substituted by F or Cl,

$Z^{31}$ ,  $Z^{32}$  being independently from one another -O-, -CO-, -COO-, -OCO-, -SO<sub>2</sub>-O-, -O-SO<sub>2</sub>-, -CH<sub>2</sub>CH<sub>2</sub>-, -OCH<sub>2</sub>-, -CH<sub>2</sub>O-, -CH=CH-, -C≡C-, -CH=CH-COO-, -OCO-CH=CH- or a single bond and

m is 0, 1 oder 2.

11. (Currently Amended) Polymerizable mixture according to claim 8, ~~9 or 10~~ further comprising at least one polymerizable and photoorientable compound.
12. (Original) Polymerizable mixture according to claim ~~11~~ characterized in that the polymerizable and photoorientable compound is denoted by the formula IV



wherein

P is a polymerizable group,

Sp is a spacer group having 1 to 20 C-atoms,

X is a group selected from -O-, -S-, -CO-, -COO-, -OCO-, -O-

COO-, -SO<sub>2</sub>-O-, -O-SO<sub>2</sub>- or a single bond,

n is 0 or 1,

A<sup>41</sup>, A<sup>42</sup>,  
A<sup>43</sup>, A<sup>44</sup> are independently of each other 1,4-phenylene, wherein 1, 2, 3 or 4 H-atoms may be replaced by F or Cl,

A<sup>41</sup>, A<sup>44</sup> may in addition to the above given meaning denote independently of each other a single bond,

Z<sup>4</sup> is -N=N-, -CH=CH- or  $\text{-(O)}_{s1}\text{-(CH}_2\text{)}_{s2}\text{-O-CO-CH=CH-}$   
with s1 being 0 or 1 and s2 being 0 to 6,

R<sup>41</sup> is H, halogen, NO<sub>2</sub>, CN, SCN, straight chain, branched or cyclic alkyl with 1 to 25 C-atoms wherein one or more CH<sub>2</sub> groups can also be replaced by -O-, -S-, -NR<sup>o</sup>-, -CH=CH-, -C≡C- in such a manner that O- and/or S-atoms are not linked directly to one another, and wherein one or more H-atoms can also be replaced by F or Cl, or denotes P-(Sp-X)<sub>n</sub>-.

13. (Currently Amended) Polymer material obtainable by polymerizing a polymerizable mixture according to ~~one of the claims 8 to 12~~ claim 8.
14. (Original) Polymer material according to claim 13 obtainable by a process comprising the following steps
  - a) forming a thin layer of the polymerizable material,
  - b) aligning the molecules of the compounds of the mixture in the thin layer into a uniform orientation or a patterned orientation such that in each pattern the orientation is uniform,
  - c) polymerizing said polymerizable material.

15. (Currently Amended) Use of a compound according to ~~one of the claims 1 to 7~~  
claim 1 ~~or of a polymerizable mixture according to one of the claims 8 to 12~~  
for the manufacture of photoluminescent and/or electroluminescent polymer  
materials.
16. (Currently Amended) Use of a polymer material according to claim 13 ~~or 14~~ as  
a photo- and/or electroluminescent material in a light emitting device, an  
optical or electrooptical display element.
17. (Currently Amended) Light emitting device comprising a polymer material  
according to claim 13 ~~or 14~~ as a photo- and/or electroluminescent material.
18. (Currently Amended) Optical or electrooptical display element comprising a  
polymer material according to claim 13 ~~or 14~~ as a photo- and/or  
electroluminescent material.
19. (Newly Added) Use of a polymerizable mixture according to claim 8 ~~or~~ for the  
manufacture of photoluminescent and/or electroluminescent polymer  
materials.